

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: March 12, 1996

Date Received: March 7, 1996

Project: Metro Self Monitor, PO #M52543

Date Samples Extracted: March 7, 1996

Date Extracts Analyzed: March 8, 1996

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE  
FOR CHROMIUM, COPPER, NICKEL, AND ZINC  
USING METHOD 6010**

**Samples Processed Using Method 3005**  
Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M52543	0.39	0.36	0.25	0.13
Method Blank	<0.05	<0.05	<0.05	<0.05

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**QUALITY ASSURANCE RESULTS  
FOR CHROMIUM, COPPER, NICKEL, AND ZINC  
BY INDUCTIVELY COUPLED PLASMA (ICP)  
(METHOD 6010)**

Laboratory Code: 66957 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.39	0.38	3	0-20
Copper	mg/L (ppm)	0.36	0.35	3	0-20
Nickel	mg/L (ppm)	0.25	0.28	11	0-20
Zinc	mg/L (ppm)	0.13	0.09	36a	0-20

Laboratory Code: 66957 (Matrix Spike)

Analyte:	Reporting Units	Spike Level	Sample Result	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	0.39	90	100	80-120	11
Copper	mg/L (ppm)	5	0.36	93	103	80-120	10
Nickel	mg/L (ppm)	10	0.25	89	93	80-120	4
Zinc	mg/L (ppm)	5	0.13	88	88	80-120	0

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD		Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	95	100	80-120	5
Copper	mg/L (ppm)	5	98	103	80-120	5
Nickel	mg/L (ppm)	10	94	99	80-120	5
Zinc	mg/L (ppm)	5	93	97	80-120	4

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

KJS: AL  
3.7.96  
2:00

Send Report To: ALASKAN Copper Works Contact: CECRO Thompson  
Company: 628 Hammond St  
Address: Seattle WA 98134  
City, State, Zip: 342-8379  
Phone #: 3-7-56 Date:

FE NO.	PROJECT NAME	PURCH ORDER #
7238	metres Self monitor	m 52543
AMPLERS (signature)		PROJECT LOCATION
		3200 6th Ave. S.
REMARKS	SAMPLE DISPOSITION INFORMATION	

☐ Dispose of 10 days

☒ Return Service

☐ Call for Instructions.

[illegible]

PC/MS/COC

09/15

AKC-0012270

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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Andrew John Friedman  
James E. Bruya, Ph.D.  
(206) 285-8282

3012 16th Avenue West  
Seattle, WA 98119-2029  
FAX: (206) 283-5044

March 12, 1996

Gerry Thompson, Project Manager  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

Dear Mr. Thompson:

Enclosed are the results from the testing of material submitted on March 7, 1996 from your Metro Self Monitor, PO #M52543 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Kurt Johnson  
Chemist

keh  
Enclosures  
FAX: 382-7335  
ACU0312R.DOC



**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

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**March 12, 1996**

**INVOICE # 96ACU0312-1  
DUPLICATE COPY**

Accounts Payable  
Alaskan Copper Works  
628 South Hanford  
Seattle, WA 98134

**RE: Project Metro Self Monitor, PO #M52543: Results of testing requested by  
Gerry Thompson, Project Manager for material submitted on March 7, 1996.**

**1 water sample analyzed for  
Chromium, Copper, Nickel, and Zinc  
using Method 6010 @ \$65 per sample**

**\$ 65.00**

**Amount Due .....**

**\$ 65.00**